CLAIMS:

1. A rapid setting, controlled low strength composition of Class C fly ash comprising hydrated lime in the amount of 0.1% to 15% by weight and an iron chelating compound in the amount of from 0.01% to 5% by weight sufficient to accelerate the hydration and set time of said fly ash.

2. A rapid setting, controlled low strength composition of Class C fly ash comprising hydrated lime in the amount of 0.1% to 15% by weight of fly ash and an iron chelating compound in the amount of from 0.01% to 5% by weight sufficient to accelerate the hydration and set time of said fly ash, and a filler material in the amount of 1:10 to 10:1 parts by weight.

3. A method by which the hydration and set time of a cementitious mixture containing Class C fly ash is accelerated comprising the step of adding hydrated lime in the amount of 0.1% to 15% by weight of and an iron chelating compound in the amount of from 0.01% to 5% by weight cementitious material to said cementitious mixture.

4. A rapid setting, controlled low strength composition of Class C fly ash comprising a calcium source in the amount of 0.1% to 15% by weight and an iron chelating compound in the amount of from 0.01% to 5% by weight sufficient to accelerate the hydration and set time of said fly ash.

5. The composition of claim 4 wherein said source is quicklime.

6. The composition of claim 4 wherein said calcium source is selected from the group consisting of calcium nitrate, calcium nitrite, calcium formate, calcium acetate, calcium proprionate, calcium lignosulfonate, calcium oxide, calcium hydroxide, calcium hypochlorite, anhydrous calcium sulfate, calcium sulfate dihydrate, and calcium sulfate hemihydrate.

7. The composition of claim 4 wherein said calcium source is a circulating fluidized bed coal ash containing free lime in the amount of 0.25% to 70% by weight of Class C fly ash.

8. The composition of claim 2 wherein said filler material is selected from the group consisting of Class F fly ash, silica sand, dolomitic calcium carbonate sand, limestone sand, expanded perlite, expanded styrofoam, bottom ash, slag, foundry sand, expanded shale, clay, ground granite sand, pumice and gravel.

9. The composition of claim 4 wherein said iron chelating compound is selected from the group consisting of an alkanolamine, a polymer of ethyleneimine, a block copolymer containing polyethyleneimine segments, an amino-substituted polymer of acrylic acid, the salt of an amino-substituted polymer of acrylic acid, a carboxyated amine compound, a salt of a carboxyated amine compound, ethylenediaminetetraacetic acid and salts thereof; nitrilotriacetic acid and salts theeof, an amine substituted surfactant, an amine oxide substituted surfactant, and a guanidine salt.